

## REMARKS ON THE TECHNIQUE OF PROSTATECTOMY, WITH REPORT OF A CASE.

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THE recent interesting discussion on prostatectomy in the New York Surgical Society, published in the *ANNALS OF SURGERY* of June, 1900, leads the writer to publish the following case, not only because the operation is still under discussion, but also because the method used offers some radical changes from Alexander's operation. It can scarcely be denied that the suprapubic cystotomy advocated by Alexander, in order to be able to crowd the prostate down into the perineum by two fingers in the bladder, at best is a serious complication in old and weak patients, and forces them to stay in bed longer than otherwise would be necessary. Parker Syms<sup>1</sup> advises, in order to avoid the suprapubic cystotomy, to make a laparotomy just above the vesical fold large enough to introduce the hand, in order to press the prostate well down into the perineum through the intact bladder wall. While this may be preferable to the cystotomy, it may add a good deal of shock to the operation, and may, in spite of antiseptic precautions, be followed by peritonitis. It also necessitates prolonged staying in bed. Nichol's method, also, has the disadvantage of a suprapubic cystotomy. Syms mentions in a foot-note that Alexander in two cases, in very thin subjects, was able to dispense with the suprapubic cystotomy, as he found it possible, with one hand behind the symphysis, to push the prostate towards the perineal incision.

Dr. A. B. Johnson<sup>2</sup> has recommended, as a modification of Syms's method, to make a small incision above the pubes, but without opening the bladder or the peritoneum, and with

<sup>1</sup> *ANNALS OF SURGERY*, March, 1899. <sup>2</sup> *ANNALS OF SURGERY*, June, 1900.

a finger introduced through this incision crowd the prostate downward. He did this successfully in a small man.

In order to make the operation an ideal one, we should, it seems to me, be able to dispense with all suprapubic operations and to enucleate the hypertrophied lobes of the prostate through the perineum without opening the urethra, and without draining the bladder, unless the cystitis should demand it. That it is possible to dispense with the suprapubic cystotomy, even in a large and fleshy man, my case shows. Under deep narcosis, I was able to crowd the prostate down into the perineum with a hand above the pubes and examine and palpate even its upper border with a finger in the rectum. I, therefore, gave up the suprapubic cystotomy and did the whole operation through the perineum, not only with ease, but, by adopting a different incision, absolutely under the eye. I extended the posterior end of the longitudinal incision, from the bulb of the urethra to the anus, in a curve around the anterior half of the anus on both sides; dissected loose the curved flap containing the anterior wall of the rectum, and exposed the prostate to sight. With a grooved stone sound in the urethra, in order to be able to feel the prostatic urethra plainly during the enucleation, I made a median incision in the middle line of the prostate posteriorly, but without opening the urethra; introduced the finger, entered the capsule and enucleated with ease both hypertrophied lateral and middle lobes, meanwhile pressing the prostate down into the perineum with the hand above the symphysis pubis. Unfortunately, the prostatic urethra was torn on one point low down by contact of the finger with the rather sharp edge of the stone sound, and I therefore drained the bladder for seven days through the tear. How far it is possible to avoid tearing the urethra during the enucleation, I am not prepared to state. A soft Mercier's catheter, however, will be a sufficient guide during the enucleation, and with care, I believe, the tear can be avoided. In that case it will be the ideal operation for prostatic hypertrophy, devoid of danger, except possibly through infection of the prostatic veins. With the floor of the bladder uninjured, with no suprapubic

cystotomy, with no drainage through the perineum, and with an intact urethra, the patient may be allowed to leave his bed in a few days. If drainage be necessary on account of the cystitis, a permanent catheter may be introduced through the urethra and left as long as necessary, or the urethra may be opened secondarily through the perineal wound. The weight of the removed lobes was  $2\frac{3}{4}$  ounces, 0:88 grammes, sufficient to show the enormous hypertrophy of the prostate in this case. The history of the patient is as follows:

Mr. M. H., sixty-seven years of age, entered the German Deaconesses Hospital on June 14, 1900. Had always enjoyed good health until he, about fourteen years ago, suffered from inflammation of the bladder of unknown cause. He was sick for three months, had bloody urine, frequent urination and pain, but recovered by internal medication and washing out of the bladder. About four years ago he had retention of urine after a debauch and heavy drinking. A physician was called, but was unable to introduce a catheter. Twenty-four hours later another physician succeeded in introducing a catheter and emptying the bladder of a large amount of urine, said to have been about two quarts. The urine was clear, and after catheterization for a few days, he was again able to pass it without instruments, but slowly and with some straining. A year later he had another attack of retention; catheters were used a few times, and for a month there was considerable blood in the urine. He had no pain and urinated comparatively easily. Two years ago, another physician diagnosed prostatic hypertrophy and performed double vasectomy. He seemed to improve for a time, but the symptoms returned, and for more than a year he has been obliged to pass his water every two hours day and night, and with considerable pain and distress. The intervals have gradually become shortened, and he is now obliged to pass water about every hour. He is a large, heavy man, weighing 240 pounds, otherwise healthy looking. He complains of chronic constipation and haemorrhoids. A Mercier's catheter shows four ounces of residual urine. The urine is slightly alkaline; contains large amount of blood and pus cells; no albumen in the strained urine; large amounts of phosphates. There is no apparent atrophy of the testes. By rectal examination the prostate is felt as a large, hard, globular mass as large as a medium-sized orange.

*June 15, 1900.*—Examination under chloroform narcosis. By bimanual examination the prostate could be pressed down towards the perineum in such a degree that the whole posterior surface could be palpated, and the upper margin be felt by the finger in the rectum. After washing out the bladder, a grooved stone sound was introduced into the bladder with the patient in the lithotomy position; the perineum incised in the manner described; the prostate exposed to sight; its capsule split, and the hypertrophic lateral and middle lobes, weighing twenty-two drachms, enucleated with ease. The prostatic urethra was torn inside the capsule, and a large drain, therefore, introduced into the bladder. The cavity in the prostate was packed with iodoform gauze. The curved part of the incision was sutured. The patient bled considerably during the afternoon and evening; the bleeding being venous in character. A number of small clots were washed out of the bladder through the drain. He was put on a milk diet, and ordered urotropine, seven grains, every four hours, with a sitz-bath, morning and evening. The bladder to be washed out every four hours.

*June 19.*—The temperature was ranging about 100° F.; the gauze packing was removed; the haemorrhage has ceased.

*June 22.*—Drains removed, feels well, but still some rise of temperature; pulse 94.

*June 24.*—Considerable tenesmus of the bladder with retention of urine. A metallic catheter was introduced with ease, and the bladder emptied and washed out. The urine was alkaline in reaction and odor. Albumen abundant, but no albumen present in a strained sample. Microscopically, it contained pus and blood cells, amorphous phosphates, and triple phosphates. Injection of a 2-per-cent. solution of silver nitrate.

*June 28.*—Has to be catheterized every four hours on account of bladder tenesmus. Urine acid in reaction, clearer, and much less offensive, but contains still pus, blood, and phosphates. Patient is sitting up.

*June 30.*—Slept whole night without catheterization. Still pus in urine and tenesmus after having retained the urine four hours. Repeated injection silver nitrate, 2 per cent.; urotropine  $7\frac{1}{2}$  grains, and boracic acid 6 grains, alternately every two hours. The wound in perineum is granulating and contracting. Occasionally he passes water both through the penis and the perineum,

but generally the bladder must be emptied with the catheter every four hours.

*July 2.*—Normal pulse and temperature, tongue clean, appetite good, urine contains less pus; there are less frequent spasms of the bladder. Urine passes still almost exclusively through the perineal wound.

*July 4.*—Instillation into bladder at night of orthoform, 15 grains; salt solution, 1 ounce.<sup>1</sup>

*July 8.*—He has thereafter had no spasms, been able to sleep the whole night and retain the water. It commences to pass through the penis, the perineal wound is rapidly contracting, the urine is acid, without alkaline smell and with very little pus.

*June 12.*—Urine normal without pus or blood. Almost all urine passes now through the penis. He feels strong and healthy; sleeps six hours without voiding his urine, and then without spasms. Discharged to his home.

*September 6.*—Patient has since improved steadily. In August he complained of severe burning in glans penis after micturition. By Bigelow's evacuator several teaspoonfuls of small concrements of urates, probably the result of the injection of the insoluble orthoform, were removed, and the burning promptly disappeared. He sleeps through the night, and is able to void his urine in the morning in a big stream when lying in bed. Towards evening, however, he is obliged to use a catheter in order to empty his bladder. There seems to be a valve or fold at the neck of the bladder which closes the entrance into the prostatic urethra when he stands erect. By examination through the rectum, with a stone sound in the urethra, the whole prostate is noticed to be absent, and the sound is felt just outside the rectal wall. A lateral scarification with Bottini's apparatus will probably remove this obstruction with ease.

<sup>1</sup> Orthoform has been recommended partly on account of its anaesthetic action, partly on account of its antifermentative action on alkaline urine. See *Münchener med. Wochensch.*, Nos. 2 and 3, 1900.